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ABSTRACT

This manual presents information on how to conduct a tutorial reading program that features a plan for motivating students. The program is intended for upper elementary and junior high school students who read approximately on a second- or third-grade level. The basis for this program is an instructional design, the Staats "Motivated Learning" Reading Procedure. The lesson procedures are structured so that nonprofessional persons can learn them with brief training. The utilization of tutors makes this program suitable for inner city schools, where more individualized reading instruction is needed. The manual is divided into two parts. Part 1 presents information on operating the program. This includes how to arrange instructional schedules, prepare materials, select students, select and train tutors, and supervise the program while in progress. Part 2 (See CS 000 428) provides the supervisor's materials and a tutor's guide. These are samples of the actual materials that may be duplicated for tutor training and student instruction. Included are lesson materials, record sheets, tutor materials, and training materials, along with the tutor's guide. (Author/WR)

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PRACTICAL PAPER NO. 12

MOTIVATED READING: A SUPERVISOR'S MANUAL FOR A TUTORIAL READING PROGRAM PART 1

REPORT FROM THE PROJECT ON MOTIVATED LEARNING

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WISCONSIN RESEARCH AND DEVELOPMENT
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Practical Paper No. 12

MOTIVATED READING: A SUPERVISOR'S MANUAL FOR A TUTORIAL READING PROGRAM

Part 1
Information on Operating the Program

by
Priscilla Butts and June Sanders
Milwaukee Public Schools

Report from the
Project on Motivated Learning

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Wisconsin Research and Development Center
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Madison, Wisconsin

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Statement of Focus

Individually Guided Education (IGE) is a new comprehensive system of elementary education. The following components of the IGE system are in varying stages of development and implementation: a new organization for instruction and related administrative arrangements; a model of instructional programing for the individual student; and curriculum components in prereading, reading, mathematics, motivation, and environmental education. The development of other curriculum components, of a system for managing instruction by computer, and of instructional strategies is needed to complete the system. Continuing programmatic research is required to provide a sound knowledge base for the components under development and for improved second generation components. Finally, systematic implementation is essential so that the products will function properly in the IGE schools.

The Center plans and carries out the research, development, and implementation components of its IGE program in this sequence: (1) identify the needs and delimit the component problem area; (2) assess the possible constraints—financial resources and availability of staff; (3) formulate general plans and specific procedures for solving the problems; (4) secure and allocate human and material resources to carry out the plans; (5) provide for effective communication among personnel and efficient management of activities and resources; and (6) evaluate the effectiveness of each activity and its contribution to the total program and correct any difficulties through feedback mechanisms and appropriate management techniques.

A self-renewing system of elementary education is projected in each participating elementary school, i.e., one which is less dependent on external sources for direction and is more responsive to the needs of the children attending each particular school. In the IGE schools, Center-developed and other curriculum products compatible with the Center's instructional programing model will lead to higher student achievement and self-direction in learning and in conduct and also to higher morale and job satisfaction among educational personnel. Each developmental product makes its unique contribution to IGE as it is implemented in the schools. The various research components add to the knowledge of Center practitioners, developers, and theorists.

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Finally, we wish to dedicate this manual to the late Mrs. Erma Coggs, whose observations and performance as a tutor in Milwaukee were truly notable and whose friendship was so valuable to us during the initial years of the program. To these people and the dozens of tutors and students who have inspired our work for five years we offer our sincere thanks.

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Abstract

The manual presents information on how to conduct a tutorial reading program that features a plan for motivating students. The program is intended for upper elementary and junior high school students who read approximately on a second or third grade level. The program can serve especially those students with behavioral difficulties that hinder learning; a motivational system reinforces the performance of such students and sustains their effort in learning over long periods.

The basis for this program is an instructional design, the Staats "Motivated Learning" Reading Procedure, developed through research by A. W. Staats. The manual indicates how the original procedures have been adapted for use with some commercial reading materials. Included is a description of the adapted programs occurring in the Milwaukee Public Schools during three years.

The lesson procedures are simply structured so that nonprofessional persons can readily learn them with brief training. The utilization of tutors makes this program particularly suitable for inner city schools because it can provide work and educational opportunities for unemployed persons in the community (adults or older students). It also provides more individualized reading instruction so needed in these schools.

As a guide for the program supervisor, the manual is divided into two parts. Part 1 presents information on operating the program. This includes how to arrange instructional schedules, prepare materials, select students, select and train tutors, and supervise the program while in progress. Part 2 provides the supervisor's materials and a tutor's guide. These are samples of the actual materials that may be duplicated for tutor training and student instruction. They include lesson materials, record sheets, tutor materials, and training materials along with the tutor's guide.

I
Introduction

A tutorial program using reinforcement to motivate students' learning in remedial reading was the focus of a research study conducted in the Milwaukee Public Schools in 1966-67 by A. W. Staats, as a project principal investigator of the Wisconsin Research & Development Center for Cognitive Learning. This study led to an adaptation of the reading procedures in a tutorial program at Fulton Junior High School in Milwaukee. This school was one of three that participated in the former study, which employed adults and senior high school students as tutors. The study applied procedure based on a learning theory that Staats, a professor in educational psychology, had been developing through laboratory and classroom studies since 1955. Designed specifically for these research studies were some experimental reading materials. Other materials, however, might be used with the Staats "Motivated Learning" Reading Procedure, as indicated by Staats, Van Mondfrans, and Minke (1967), when implementing the program in a regular curriculum.

The purpose of this manual is to provide necessary information so that school personnel may carry out a similar remedial reading program using materials different from those in the research phase. To become operational, the experimental procedures have to be adapted to commercially available materials. Also, a school staff member needs to know how to organize and supervise the program. Ways are suggested here for programming the instruction, selecting the tutors and students, preparing the materials, training the tutors, and supervising the ongoing program. Part 2 contains practical information and forms for the supervisor to use in operating the program. Finally, a tutor's guide at the end of Part 2 provides direction during training and reference during reading instruction. Before the actual manual with its suggestions for implementation (Part 1, Section III), there will be an overview of the adapted programs (Section II), and a description of the original experimental procedure in this introduction (Section I).

The following brief description does not attempt to report the complexities involved in the Staats "Motivated Learning" Reading Procedure (hereafter called the Staats procedure), but is simply a summary of its main characteristics. One essential feature of this procedure is the use of material rewards for reading behavior in order to motivate a student's performance of learning tasks and to maintain his attention to these tasks over extended periods of time. Reading responses are reinforced frequently by tokens of differing values (colors). Which token value is awarded depends on the accuracy of the response. The accumulated token amounts are exchanged eventually for a material item, which the student has chosen as his goal. A schedule of reinforcing responses has been established through previous studies, particularly a pilot study by Staats and Butterfield (1965) and a school study by Staats, Minke, Goodwin, and Landeen (1967).

Another feature of the Staats procedure is repeated structure in learning activities. Four kinds of reading behaviors are elicited in the same sequence for each lesson:

1. Pronunciation and recognition of single words
2. Oral reading of paragraphs (containing these words)
3. Silent reading of these paragraphs
4. Answering questions about the material read

The simple structure of lessons makes it possible for nonprofessional personnel to learn readily the methods for conducting these lessons. With periodic supervision and daily learning records the nonprofessional tutor is enabled to perform an instructional service for slow readers—

a service ordinarily requiring employment of a highly paid teacher trained as a reading specialist.

The Staats procedure is intended for those students who are severely retarded in their reading achievement (possibly three to seven years below grade level). Particularly appropriate are students whose achievement is approximately on a second- or early third-grade level. The reinforcement system is designed to motivate students who lack interest and effort in learning and who are disruptive in the regular classroom. A field study of the Staats procedure was conducted in some central schools of Milwaukee with students exhibiting such characteristics. Findings of this study are outlined in a report from the University of Wisconsin Research and Development Center by Staats, Minke, and Butts (1970).

II
Overview of Adapted Programs

Past Milwaukee School Programs

Once the research project ended in Milwaukee, efforts continued to provide its services; some adaptations were necessary because of different materials, minimal funds, and limitations on personnel to serve as tutors. Adapted programs were devised and then conducted at Fulton Junior High School, one of the schools in the former field study.

In 1967-68 the program was geared to the main source of available tutors—high school students employed through Neighborhood Youth Corps. Their working hours limited the program to operation during the last class period and after school. Materials were those used for the research phase (borrowed from the Research & Development Center). Twenty students were tutored in the program. The main emphasis of the 1967-68 program was to develop methods of training tutors and supervising their work more closely. This involved additional means of on-the-job training and communication. Toward the end of the school year one author of this manual was hired as a teacher aide. Her former experience in the research project enabled her to work with the reading teacher in developing another instructional program, using different materials with similar methods. The work involved tutoring two students using detailed records of their performance; this was a pilot study for the program conducted in the following year.

In 1968-69 the Staats procedure was adapted for use with a series of commercially prepared books supplemented with other lesson materials. Since the main adaptations in the program were made during this year, a thorough account of this program is described in Appendix A. Informal evidence on 27 students and observations of school personnel led to the decision to continue this tutorial program with ESEA Title I funds for the succeeding school year.

In 1969-70 the tutorial program had a smaller population (12 students) with the intent of refining procedures and studying the daily performance of students more carefully. No student tutors were employed since enough teacher aides were available. As part of the Title I proposal, an evaluation design of the program was planned by personnel in the Department of Educational Research of the Milwaukee Public Schools (Division of Planning and Long-Range Development). Findings in the report of this research department are summarized in Appendix B; a concluding statement indicated that there were significant differences in achievement favoring the experimental group over the control group in word recognition and comprehension.

In 1970-71 the tutorial program was continued with one main difference—the student tutors were younger than in previous programs. Ninth-grade students were utilized to tutor seventh-grade students from the same school. Neighborhood Youth Corps provided employment for these tutors to work during a daily study hall period. Results of this program are not yet available.

Adaptations Resulting From Programs

Materials

The first factor that produced adaptations of the Staats procedure was selection of commercial reading books to replace the experimental materials (no longer available). For the research to be carried into a developmental state, currently published materials needed to be located that would allow for retention of the essential features of the Staats procedure. Thus, reading materials were selected having characteristics similar to those in the experimental materials. The choice was a series of eight developmental books entitled

The Morgan Bay Mysteries by Rambeau and Rambeau (1962/65).

Appendix D has a detailed description of these reading materials—their characteristics and their similarities to the experimental materials. Also described in Appendix D are additional modifications for all instructional materials in the adapted tutorial program. These include:

1. Changes in the books:
   a. Subdivision of pages into paragraphs
   b. Selection and alteration of comprehension questions

2. Addition of supplementary materials:
   a. Word cards
   b. Word lists and answer keys for lessons
   c. Materials for record keeping

Tutorial Procedures

The procedures in the adapted tutorial program evolved from using the mystery book materials and observing student responses to these materials over two years. The adaptations included procedures for conducting the daily book lesson, the vocabulary review lesson, and the reward system.

Although some changes from the experimental procedures were required by different materials, the intent was to retain the four basic reading tasks of the Staats procedure. These were incorporated into the format of book materials; the adapted procedure for the Book Lesson then follows a four-part outline.

Procedures for a page:

1. Single words
   a. Presentation: words read aloud and award of tokens
   b. Repeated presentation and award of tokens

2. Oral reading
   a. Presentation: sentences read aloud and award of tokens
   b. Repeated presentation: some sentences reread and award of tokens

Procedures for a chapter:

3. Silent reading
   a. Presentation: chapter material read and award of tokens
4. Comprehension questions
   a. Presentation: questions answered and award of tokens
   b. Repeated presentation: some questions reread and answers corrected followed by award of tokens

Also, with different materials some adaptations occurred in procedures for the Vocabulary Review Lesson: reviews became more frequent and were based on intervals of chapter divisions, and words missed on one review were carried over to the next review.

To maintain daily points at a fairly even and substantial level, the reward system was altered somewhat as to schedule and kinds of rewards; specifically: the point value of tokens was altered for some of the colors, the frequency of presenting tokens was increased in some cases, and the goal for a reward was changed to a material object that could be obtained by a redeemable card worth its value. Appendix C describes more fully these tutorial procedures, the differences between adaptations and the experimental procedures, and the reasons for the changes.

Goals of the Adapted Programs

As the tutorial program was modified, some general expectations developed for what the program might accomplish in a school, as well as specific objectives for reading skills it might develop for participants. These learning objectives are given first, followed by the more general goals. The objectives are listed according to the four learning activities of a reading lesson:

1. Word recognition
   to increase vocabulary that can be recognized at sight
2. Oral reading
   to strengthen the recognition of words after initial training
   to develop their meanings in the content of story material
   to develop oral expression of this content to another person
3. Silent reading
   to develop understanding of words in larger sequences of events
   to increase silent reading speed on material already read orally
4. Comprehension
   to develop reading for details and relationships through questions on material read silently

In addition to these objectives for skill

development, the tutorial program can contribute to achieving these general goals within the school curriculum:

1. To provide the opportunity for low-ability students to learn reading skills outside classes too difficult for them. If scheduled during a language period, the removal of these students can allow the remaining students to proceed on a more rapid, advanced level.

2. To provide motivation of learning effort for students having serious problems in behavior. The program provides daily instruction difficult to maintain for such students in a normal-size classroom. Because of the motivational system there is also a possibility of correcting some of these behavioral problems.

3. To provide additional remedial instruction in the curriculum without the necessity of adding reading specialists.

4. To provide opportunity for nonprofessional persons to benefit educationally from the experience of tutoring—in initial job training or possible preparation for teaching. Any participation of high school tutors also allows for coordination of a senior and junior high school in a joint educational effort.

III
Implementing the Tutorial Program

To carry out the tutorial reading program a superviser needs specific information, so this paper is designed as a manual providing steps in operating the program. The various steps are in the order they ordinarily occur as the program gets started: how to program the instruction, select tutors and students, prepare materials, train the tutors, and supervise their work during the program.

Programming Instruction

To prepare for operation of the tutorial program, some advance planning, mainly with administrators, is needed. This usually involves discussing time, space, and funds required for instruction.

Scheduling Time for Instruction

Periods for tutoring. The basic decision concerns the subject from which students are removed for tutoring. Some possibilities are:

1. Language arts or reading
   If the tutorial program is considered an integral part of the language curriculum, then students would be reassigned from these classes for tutoring.

2. Subjects requiring much reading (e.g., social studies)
   If this program is considered supplementary to language instruction, then students would be removed from subjects in which their limited reading ability tends to produce frustration and failure.

3. Subjects involving little reading (e.g., music, art, industrial arts)
   If it is not feasible or preferable to remove students from major subjects, then removal may be from the less major subjects. Two disadvantages of this choice are: less frequent scheduling of these subjects (so tutoring would not be daily) and elimination of a subject in which underachieving readers may find expression and success.

4. Study halls
   Removal of students for tutoring during study hall periods has both advantages and disadvantages as follows:

   a. Advantages:
      —Scheduling is simplified; no subject change is required.
      —No rearrangements are needed with teachers (grades, credits).
      —No required instruction is missed by students.

   b. Disadvantages:
      —Classroom instruction is not served by removing students who tend to disrupt activities and are unable to keep up.
      —Opportunity for students to prepare for other classes is almost eliminated (these students are unlikely to work at home).
      —Negative attitudes often develop among students who are singled out to work while their classmates have free choice during study hall. These attitudes also can occur from adding another subject; this addition may overburden a student already having difficulty with regular subjects.

Whatever the subject from which students are removed, it is important to determine whether periods for tutoring different students may be distributed throughout the school day. If so, full-time tutors can be employed. If not, tutors are sought on a part-time basis. If tutorial sessions are scheduled through the school day, it is important to have at least two tutors assigned each hour to allow for substitution (or supervision) for a student when one tutor is absent.

Grade levels. The tutorial program can be started more readily by drawing students from one grade level rather than several grades. The amount of testing and teacher contacts are then limited. Also, final evaluation of the program is simplified.

Frequency and length of instruction. The frequency of sessions determines the length of time planned for students in the tutorial program. Daily sessions are definitely preferable. Experience with the trial programs indicates that those students with a higher initial reading level (generally third grade) may complete the program in a 90-day semester with regular daily attendance in 40- to 50-minute sessions.

The planning with administrators establishes whether scheduling can continue throughout the year. If programming can take place only for a semester, then students would be chosen on a higher ability level so that they have a chance to complete the program. Also, a semester program suggests a shorter training period for tutors to allow as many tutorial sessions as possible during the semester. Tutoring students for one semester has the advantage of serving more students through the year. However, there are certain disadvantages: selection of students may omit those of lower ability (most in need of individual instruction); students who tend to be truant or absent may not attend enough sessions in one semester to complete the program; and the time for organizing materials and training tutors may prevent even the higher ability students from finishing in the first semester.

Locating Space for Instruction and Materials

Room for tutorial sessions. Planning some area for tutoring is essential. Students need to be isolated from a class and somewhat separated from other students being tutored. In a crowded school the cafeteria may be the likely place for instruction. If extra classrooms are available, these work for two or three students at one period; more students in a room have proven less than satisfactory. Sometimes small rooms may be located, such as unused offices or storage areas.

Room for storage and training tutors. A storage area must be set up, preferably apart from regular classrooms, so tutors can have access to it during the day without interrupting instruction. An inquiry to school administrators may also determine if storage equipment (a file cabinet and bookshelves) is available for this room. If not, these items need to be budgeted along with the instructional materials. A typewriter also is essential, especially during the training period for tutors; in fact, access to several typewriters may be discussed for the early stages of the program.

At the outset a room is also needed for training tutors one or two periods a day. Ideally, this room is the same as that for storing materials; then there is centralization of materials and personnel during training and later when conferences are needed. If one room is not available as a headquarters for tutors and storage, then a classroom needs to be located temporarily for the training period.

Arranging Funds for Materials and Personnel

Expense for instructional materials. Discussion with school administrators will indicate availability of funds for reading books and supplementary materials. An estimate of the book expense is best determined from the number of tutors planned for the program. Each tutor needs one set of the eight Morgan Bay Mysteries, which costs approximately $20.00. Other necessary materials are school supplies such as folders, pencils, index cards, stencils, and duplicating paper. A complete listing is given in the section on preparing materials. The total cost of these school supplies depends on the number of students served.

Fund for material rewards. School administrators can indicate whether the cost of rewards may be budgeted out of the same fund used for materials. If not, businesses in the community may be contacted for contributions of items that students can choose as goals. The supervisor needs to allow extra time for these contacts. It is important to obtain a variety in the types and values of these items. Students differ as to what is rewarding to them. Some may prefer food; others may prefer store merchandise. Also, the same student often changes his preference for the type and amount of goal during the program.

The three businesses which contributed in the trial programs are examples of possible donors: a restaurant chain (three kinds of food

valued between 20¢ and 50¢; a nearby record store (45-rpm records worth 98¢ each); and a department store (merchandise available through its catalog in amounts of $2.00 to $5.00).

Rewards can be given in the form of a letter or card redeemable when the student presents it at the firm. Other possibilities that have been tried are tickets to local high school basketball games and partial memberships in the YMCA.

The principal or others active in the community can be helpful in suggesting which businesses may wish to donate rewards. Contribution to the reward system gives the private sector an opportunity to provide direct support of local public education. Donating to the tutorial program may also be beneficial to the business for publicity, tax benefit, and community service. The appeal to businesses may include the importance of joining cooperatively with the school system to support education in the neighborhood.

The necessary funds for rewards obviously depend on the number of students in the program. The total amount may be calculated by multiplying number of students times an estimated per pupil cost. A range of pupil cost from the two-year operation may serve as a guide:

> In the first year, students attending most regularly (the highest, 75 days) earned between $3.10 and $7.30. In the second year, more sessions were possible (the highest, 116 days) so earnings were also higher—between $4.90 and $10.40 for those students attending most regularly.

If allowance is made for differences in individual earnings and length of instruction, an amount of $8.00 to $10.00 per student can be projected. Many students will not receive that much due to variation in performance, tutor absence, and their own absence.

Salary of personnel. Possible sources for funding salaries of tutors need to be determined by school administrators. A teacher aide program and Neighborhood Youth Corps were the sources used in the adapted programs. If these or other funds are unavailable, the use of volunteer personnel is another alternative. It is important to assess funding sources early, since the number of tutors available and their daily hours will determine how many students can be selected. Once the salary funding is established, the supervisor knows how many salaried tutors to select and whether to seek volunteer tutors.

Selecting Tutors

The next step in implementing the program is to locate and select persons as tutors according to some established qualifications. The following procedures and qualifying criteria have proven useful for selection.

Procedures

Locating applicants. For adult tutors, some sources for identifying interested persons are:

1. A list of applicants to the school system for teacher aide positions
2. A list of applicants to the system for other nonprofessional positions (e.g., social welfare aides, parent assistants in Head Start, etc.)
3. A list from the state employment service of those who are currently seeking employment
4. A list of applicants seeking employment from community organizations or private agencies (e.g., local community development groups, national organizations such as the Urban League)
5. A list in the school itself of parents or others interested in taking a more active role (from the principal, teachers, or parent groups)

If salaried positions are not available, various organizations usually can provide lists of adult volunteers (service groups, social groups, religious groups, university groups). A university may also have student teachers who can serve as tutors for part of their training.

For high school tutors some sources for possible applicants are:

1. A list of students with economic need seeking employment from Neighborhood Youth Corps
2. A list of students recommended by the school guidance department and/or faculty members
3. A list of those active in local youth organizations
4. A list from other community organizations which locate employment for youth

If salaries are not available, the Future Teachers of America organization in a senior high school

may have students interested in the experience of tutoring.

Salaried positions are preferable to volunteer assignments, since there is more assurance of an employee's regular attendance and responsibility for performing duties. A tutorial program that is part of the curriculum rather than extracurricular depends on this regularity of its personnel. Also, the program is intended to provide job opportunities for unemployed persons in the community or the school and for those concerned with the improvement of educational programs. The salaried position then allows nonprofessional persons to contribute to the educational effort as well as allowing them job experience that later may advance them in more professional school roles, as recommended by Reissman (1966).

Screening applicants. There are four useful procedures in selecting tutors once names of possible applicants have been obtained:

1. Distribute application forms, to be completed in handwriting (Part 2, Section IV).
2. Interview applicants to determine interest in the job and qualifications, rated on a checklist (Part 2, Section IV).
3. Test applicants on a reading test, The Wide Range Achievement Test, Reading Level II (WRAT) by Jastak and Jastak (1965).
4. Locate additional information on work experience and education of applicants.

This screening process requires materials to be obtained or duplicated by the supervisor; time is needed to prepare the Application Form and Checklist. An order needs to be placed for copies of the WRAT (which may also be used for student selection).

Qualification Criteria

Through the research phase and subsequent years of the adapted program, two basic qualifications for tutors have been established as criteria for selection: literacy and responsibility. An additional factor—interest in the job—is mentioned as desirable but not essential. However, this factor, if apparent, has provided further assurance of applicants becoming effective tutors. The degree to which an applicant meets the two basic qualifications is determined through the screening procedures just given. The minimal levels recommended for adequate job performance are now described.

Literacy.

1. Reading ability

The main criterion for literacy is reading achievement, as registered on the Wide Range Achievement Test (WRAT-Level II). This test is suggested as a quick, convenient means of determining reading level (through pronunciation of words following the interview). The results are useful in providing a comparison of applicants rather than exact levels of achievement for any one individual. In the manual for the WRAT (Jastak & Jastak, 1965) the authors caution that the score in grade rating is not to be accepted at face value: "The score seldom measures what the test name implies. . .but it represents a compromise determined by the impact of a number of factors." Also, the authors indicate that achievement results of a deprived group are significantly lower than their abilities as measured by an individual IQ test.

The test results from four years of selecting tutors have led to a recommended grade level as a selection criterion. Estimates of tutor performance have been related to test scores indicating that a score of 8.0 or above on the WRAT assures a satisfactory level of literacy for tutors to perform their duties satisfactorily. Most adult applicants have met this criterion. High school applicants in many cases have not.

Three years after the research phase there was a trial acceptance of some students with a score lower than 8.0 on the WRAT. Among the eleventh- and twelfth-grade students, performance was adequate for those scoring a minimum of 7.0. Several students scoring below this level were less capable in performing their duties. In the 1970-71 program some of the ninth-grade students were accepted with considerably lower scores on the WRAT-Level II (they spanned the Grade 3 through 6 reading achievement levels). The lowest student was included only because he had formerly been tutored in the same program and was therefore familiar with materials and methods. It was the purpose of this trial selection to determine if students with limited reading achievement could still function satisfactorily as tutors for those more handicapped in ability. Also, these students were selected in an attempt to discover whether their tutoring experience might contribute to their own improvement in reading achievement. In the 1968-69 program the tutors' achievement levels were an average of five years above the students they tutored (8.1 for tutors and 2.9

for their students). This difference was sufficient to establish the tutor's proficiency above the student's level. In the 1970-71 program the difference was no more than two years in some cases. Evaluation of this trial selection of low-achieving tutors is not yet possible.

2. Scholarship

Another indication of literacy may be reflected in academic records of the high school students. Average grade points have been surveyed to determine if a certain level of scholarship appears necessary for effectiveness as a tutor. Most students in the former programs have maintained at least a C average, but those students slightly below this average have still been able to carry out their duties satisfactorily. The conclusion is that students who qualify as responsible and literate according to other criteria should not be disqualified because of a grade point slightly below average.

3. Written and oral expression

Other indicators of literacy appear on the application and in the interview. Inadequate use of written language is apparent in spelling errors and limited vocabulary on the application. During the interview, an applicant's ability to communicate orally may be judged. Impressions of these two aspects of literacy can be recorded on a checklist (Part 2, Section IV).

Responsibility.

Responsibility is a more difficult job qualification to assess than literacy. In past programs some aspects of responsibility appeared in the tutors' performance and were sometimes identified in the selection procedure. If a tutor responds well in performing his duties and assumes the obligations set for the job, he usually possesses the qualities of maturity, reliability, and cooperation.

1. Maturity

The responsible tutor shows maturity by behavior such as patience and tactfulness while tutoring a student. The maturity qualification is important in developing the student's respect for a tutor (helpful for following directions). Age is the only factor that can be objectively identified in assessing maturity. Subjective impressions of other factors may be possible during the interview and recorded on the interview form. For selection of senior high school students, a recommended criterion for age is at least 16 years. Experience so far with ninth-grade students suggests they may be considered at this lower age if they appear well qualified in other areas of responsibility and literacy.

In the 1968-69 program the average age of tutors (16.7) was two years older than the students they tutored (14.7); a three-year difference existed in the mean grade placement of tutors and students. The greater difference in grade placement appeared to be important in establishing a tutor's acknowledged position to conduct lessons for a junior high student. Tutors selected from the eleventh and twelfth grades generally proved mature enough to work with seventh- and eighth-grade students. If tutors are selected from ninth grade, then it is recommended that students chosen to be tutored come from seventh grade or below in order to maintain at least a two-year difference in grade placement.

2. Reliability

The reliability of a tutor is apparent in regular attendance and accurate completion of reports on tutorial sessions. One prior indication of reliability for adults and high school applicants is the work record—number and length of jobs shown on an application blank. The former tutorial programs have shown that previous work experience is advantageous in the case of high school students. Exceptions were made for those especially well qualified in literacy and other aspects of responsibility. Work records may be checked for more specifics, such as the pattern of weekly or monthly working hours. For instance, Neighborhood Youth Corps files show hourly attendance per week on former jobs. An additional indication of reliability is the regularity of school attendance (for high school applicants). School records may be checked for tardiness, truancy, and lengthy absence due to ill health. Since the reading improvement of students is dependent on having a tutor each day, reliable attendance is considered essential.

3. Cooperation

A cooperative attitude as part of responsibility is shown by a tutor's willingness to follow procedures and respond to the supervisor's instructions. The training on procedures is very explicit; alterations in method would be made only after a conference with the supervisor. Some difficulties in past programs have been caused by tutors who independently changed procedures.

It is important to develop cooperative attitudes during training and encourage cooperation

among tutors in their daily association. The selection process may help by first preventing any clearly uncooperative, unresponsive persons from entering the program. It is especially important to identify persons who are so strong-willed that they cannot adjust to the specific requirements of the tutorial procedures.

Cooperation may be indicated in advance by the response on the application blank to questions about willingness to perform certain duties (Part 2, Section IV). A second indication is the response to oral questions during the interview. Thirdly, cooperation shows in willingness to take the reading test (which appears formidable to many applicants).

Interest in the job. Finally, the degree of interest in doing tutorial work is helpful in predicting satisfactory performance as a tutor. During the interview positive responses to the description of the job may be noted. Also, interest in reading may be shown by the applicant's own recreational reading and a positive reaction to taking the reading test.

On the application blank, questions are asked about what preference a person has for types of duties—filing, recording information, tabulating numbers, reading books, working with people, helping others, etc. In addition, the long-range goals of the applicants are requested. The vocational plans and expectations for further education may show a relationship to tutoring, especially among those who list teaching or related social service in their long-range plans. Noting these indicators of job interest may remain optional depending on the supervisor's time. As already seen, the main criteria for selection are literacy and responsibility assessed through procedures of the application and interview.

If more information is needed and time permits, other sources are available for high school applicants: student files containing cumulative school history and impressions from current teachers (who may complete a checklist similar to that in the interview).

Selecting Students

Once the tutors have been selected, the next step is to identify students who may benefit from the tutorial program. Identification can begin at the start of school and continue during the training of the tutors. Experience with the former programs indicates that one selection procedure is not enough if the program is to serve the students for whom it is designed. Several procedures for identifying likely candidates and some criteria for the actual selection follow.

Procedures for Identifying Students

To locate possible students two kinds of information are needed: reading level estimates and evidence of behavioral difficulties. There are several alternatives for obtaining this information:

Reading level:
- Large-scale testing of classes with a written survey test
- Small-scale testing of students referred as problem readers
- Location of former reading test scores in school files
- Teacher observation and informal testing of problem readers

Behavioral difficulties:
- Referrals by teachers and guidance counselors
- Check of administrators' records of disciplinary actions

Further explanation of some of these procedures follows.

Estimating reading level. A written test administered to classes can identify those in a school population who are low achievers in reading. A group test is needed that has a low enough reading level for sensitivity to students reading on the first-, second-, or third-grade achievement level. Group tests intended for junior high students generally do not measure this lower range; grade equivalents are often inflated for the low-ability students. Also, such tests often elicit random guessing and frustration for these students. Thus, a test intended for elementary intermediate students is recommended. It is important that a test identify performance of the skills developed in the program—vocabulary and comprehension. A number of intermediate reading tests can suit these circumstances:

- The Stanford Intermediate Test—Level II
- The Iowa Test of Basic Skills—Grades 3, 4, or 5
- The Metropolitan Reading Test—Grades 5 and 6
- The Nelson Silent Reading Test—Grades 3-9
- The Gates-MacGinitie Reading Test—Survey D (Grades 4-6)

The Nelson Silent Reading Test was used satis-

factorily for identification (1969-70), but its wide range makes it unsatisfactory for detecting possible differences between pre- and posttests for evaluation. It seems less sensitive to changes in achievement than intermediate tests. For the 1968-69 program the Gates-MacGinitie Reading Test was preferred for these reasons:

1. Level of difficulty is not too great for slow readers.
2. No long paragraphs present extra difficulty to slow readers.
3. The test is not labeled as intended for elementary students.
4. It omits measure of skills irrelevant to tutorial program (for example, reference skills).
5. Its range of grade equivalents (2.0-12.0) allows for conversion of raw scores for a wide range of reading levels.

Lack of time, funds, or personnel may make it impractical to survey many classes with a group test. Other possibilities exist for identifying students: group or individual tests for students referred as problem readers, school records showing former scores, and requests to language teachers for students they have tested and/or observed to be low in reading ability.

Obtaining behavior referrals. Teacher referral is essential in selecting students for behavioral reasons; teachers observe, firsthand, students having behavioral difficulties in the classroom—behavior that has led to little learning. The language teachers may be requested to submit a list of students with the most severe problems from their own records of low achievers or from a preliminary list of reading test scores. They would submit, particularly, students who show little effort in learning and students who act out in ways disruptive to class activities. Guidance counselors and administrators may also be asked to recommend students who have persistent difficulties in adjusting to classroom instruction.

Selection Criteria

Once identified, students may be selected for the program by use of two criteria: low reading achievement (minimum and maximum levels measured by an individual test), and severe behavioral difficulties. Evidence of some visual aptitude for learning words is also suggested for consideration in selection.

Reading achievement—minimum and maximum levels. A minimum achievement criterion for entrance into the program is suggested by the readability levels of The Morgan Bay Mysteries—the first book is on a 2.3 reading level. Students must have enough reading ability so they are not frustrated initially by a book too difficult for them.

After possible candidates have been located by referrals or group tests, individual tests better determine which students are appropriate for the program. For a quick, reliable measure of reading levels the Wide Range Achievement Test has proven most useful. Those students in the 1968-69 program who had difficulty with Book 1 had scores on Level I of the WRAT that ranged between 1.5 and 1.9 grade equivalents. Students scoring above 2.0 proceeded in the program without initial difficulty or change in procedures. The 1969-70 program confirmed these findings; the WRAT scores above 2.0 proved to be reliable predictors of progress by students in the tutorial program. From this test information, a minimum score criterion of 2.0 on the WRAT is recommended for students to enter the program.

A maximum score on the WRAT for entering students has been set at 3.5. This criterion was determined by observing progress of students in the former programs who scored higher than 3.5 on the WRAT. The materials appeared easy for these students (the Morgan Bay books have a readability level reaching only to 4.0). These few students progressed rapidly through the material and showed posttest gains of one year or more on the WRAT. However, in admitting these students, there could be the following disadvantages:

1. There is a risk that students will react against books too easy for them.
2. The possibility exists that the reward system will become inappropriate, reinforcing students mainly for what they already know rather than for learning new skills.
3. Limited openings for individual instruction may be filled by students whose initial ability may actually allow them success in learning within the classroom.

Only if short-term, individual instruction is needed for severe behavior problems would accepting students above the 3.5 achievement level be warranted.

The WRAT can suffice as the only instrument for selecting students (to meet a minimum and maximum criteria for achievement levels). Other individual tests may supplement the WRAT

at the outset and serve further as evaluative measures. Such oral tests as the Gray Oral Reading Paragraphs, Gilmore Oral Reading Test, and 220 Dolch Basic Sight Words have proven especially useful for pre- and posttest evaluation of progress. Testing recognition of Dolch words gives a thorough assessment of starting and ending vocabulary levels. The Gray or Gilmore Oral Reading Tests provide an extensive measure of accuracy in oral reading and comprehension skills to assess after the program as well as before. It was the Gray test and Dolch words that indicated significant differences in improved achievement for the 1969-70 program in the Title I Evaluation Report. Such measures as the Dolch words and Gray Oral Reading Paragraphs are suggested for administration after selection of tutorial students.

Testing of the Dolch words may also show approximate reading level; the known number of 220 words may be converted to reader grade level as determined by McBroom, Sparrow, and Eckstein (1944):

Number of Dolch Words Known	Equivalent Reader Levels
0-75	Pre-primer
76-120	Primer
121-170	First Reader
171-210	Second Reader
above 210	Third Reader or Above

Since the WRAT is a wide-range measure it is not very sensitive to differences between individuals in their vocabulary level. The measure of Dolch words does provide this distinction of greater differences in initial word knowledge among students to be selected for the tutorial program. Those selected who scored below 150 known words have experienced some difficulty in past programs with Book 1 of the Morgan Bay materials; therefore, as another criterion, 150 words can be considered as a minimum level for entrance into the program.

Severe behavioral difficulties. Because the program is designed particularly to motivate students who show deficiency in attention and effort, selection of such students would be favored over those retarded readers who seem motivated to learn in groups. To meet the second criterion there are several ways to select students with the most severe behavioral problems. As already suggested, referrals can be obtained from teachers with the request that they indicate the two, three, or four students (a standard number) who exhibit the most behavior difficulties in a class. Such students would be described in the same way to all teachers (e.g., lacking effort, resistant, disruptive, belligerent). Similar requests for referrals can be made to the guidance counselors. The students mentioned most frequently on all referrals would be assumed to have the most severe behavioral problems; then selection would be made from those students who also were low-achieving readers.

Another selection method is for the language arts teachers to rank only the low readers, in the order of the most severe behavior problems. Those listed first from each class would be considered first for selection.

A method not relying on teacher judgment is the tabulation of infractions for which students have been referred to the administration for disciplinary action. Those students having the most infractions would be selected if they also met the criterion of low reading achievement.

Reading aptitudes for visual learning. Since the approach for learning words is repetition at sight (essentially a look-say method), this program is especially suitable for students who have visual aptitudes in learning words. During the past programs it became apparent that students at the low achievement levels differed in their ability to learn words visually; this was evidenced by the great variation in the number of repetitions needed by different students to recognize a word independently. Some students learned quickly by a visual approach. Others appeared limited in their aptitude for learning words by visually associating sight with sound through repetition. Further investigation of these students for whom psychological reports were available supported this impression. Five of the seven students who had difficulty were reported to have inadequate visual memory or a perceptual impairment.

It is assumed that if students with visual aptitudes for learning can be identified, they may progress well in the program despite a very low level of reading ability. This assumption requires further investigation. Tentatively, an additional criterion for the lowest-ability readers may be proposed as adequate visual aptitude for learning to read.

A test for measuring visual, auditory, and motor aptitudes for learning is available for use with junior high students. This is the Group Diagnostic Reading Aptitude and Achievement Test by Monroe and Sherman. Visual aptitudes of letter memory and form memory are identified and converted to percentile scores. Severely retarded readers (below the 2.0 criterion) could be selected for this tutorial program if they

achieved a high percentile on scores for the visual tests in this battery. Another instrument measuring the different aptitudes for learning words is the Learning Methods Test by Mills. It is more appropriate for elementary students and is administered individually over a period of five days.

In summary, the two main criteria for selection of students are: reading grade equivalent between 2.0 and 3.5 (on the WRAT) and an indication of severe behavioral problems in class learning activities. Also, there is the possible consideration of an aptitude for visual learning at the lower reading levels. Students who meet these criteria would be selected first since they would be the ones likely to benefit most from the tutorial program.

Preparing Materials

While students and tutors are being selected, the preparation of materials can begin. Since this preparation extends for some time, the planning of activities may be clarified by dividing them into two periods: before training of tutors and during training.

Preparation Before Training

Ordering books. Because of time required for filling requisitions; the first step is to order books. The quantities are determined by the number of tutor positions planned. Each tutor needs a set of eight books, so one set per tutor is the suggested order. The Morgan Bay Mysteries are the recommended reading materials for a program serving junior high or upper elementary students. Reasons for choosing this series are given in Appendix D.

Ordering supplies. Following are three lists of materials as a guide for ordering supplies. These materials are needed to supplement the books, support the tutors' work, and provide records of student progress. The quantities are to be adjusted according to the number of tutors and students in the program.

1. Supplementary reading materials
   - —stencils for preparing training and lesson materials (about 30)
   - —reams of paper for duplication of these materials
   - —3x5 index cards for single words (about 1,000 per student)
   - —file dividers or construction paper from which they are cut
   - —paper clips and rubber bands to subdivide cards
   - —boxes for filing cards and dividers (If not available from school supplies, boxes may be obtained from local stores; cigar boxes or boxes used to ship pharmaceuticals, greeting cards, and candles have been used.)

2. Materials for tutors' kits
   - —large mailing envelopes to serve as containers for materials
   - —file folders for collection of training materials
   - —notepads (one per tutor)
   - —pencils (at least five per tutor)
   - —rubber bands
   - —tokens for reinforcement (available from a tiddly winks manufacturer given in references under Pirner)
   - —small boxes for separating the three colors of tokens

3. Materials for folders on students' progress and other records
   - —file folders (two per student plus 20 for program file)
   - —typing paper and school letterhead paper
   - —carbon paper and scratch paper
   - —envelopes for letters and rewards

Locating equipment. Equipment is needed for both the preparation and storage of materials. The initial planning with administrators determines the availability of this equipment. To prepare materials it is essential to have a typewriter—preferably located in the storage area. Also, access to additional typewriters is very useful during the training period (unless one person can be hired to do the typing). It is also necessary to establish access to school duplicating machines—a mimeograph machine or liquid spirit duplicating machine. Two kinds of storage equipment are needed for materials: (a) a three-drawer file cabinet for student folders, lesson materials, training materials, record materials, and supplies; and (b) a bookcase or storage cabinet with at least three shelves for books, boxes of cards, and tutors' kits.

Organizing a file. Early in the year a filing system is needed to organize materials already prepared and make ready for what is to come. A file of three drawers may be divided accordingly: one section for student folders, a second section for completed lesson sheets and other completed records, and a third for materials needed during the program. These materials may be arranged under these topics (suggested by divisions in Part 2):

1. Lesson materials
   Lesson sheets for pages, lesson sheets for chapters, vocabulary review sheets, graphs
2. Record materials
   Attendance sheets, daily session sheets, progress charts, list of rewards, time sheets
3. Training materials
   Training schedule, review of procedures
4. Tutors' guides
5. Supplies
   Stencils, paper, envelopes, carbon paper, file folders, other supplies

Duplicating materials for training. A schedule for the training period may be prepared like the one in Part 2, Section V; this may also be abbreviated to an outline of the main activities (omitting daily assignments). Another possibility is simply duplicating the plan for the first day; plans for subsequent days may be revised and duplicated as needed. The one essential material to have ready before training is the Tutor's Guide, which includes training procedures plus word lists and answer keys used throughout the program (Part 2). Time for duplicating this Guide needs to be planned before training. If the supervisor is responsible for employees' time, another material required is the Time Sheet (sample in Part 2, Section IV).

Duplicating lesson and record materials. Preparation of the following materials may be started before training, if time permits; completion occurs during training with the tutors' help. The materials are listed in the order they would be used in the training program:

1. Lesson materials (Part 2, Section II)
   Lesson sheet for pages
   Lesson sheet for chapters
   Vocabulary review sheet
   Graph
2. Record materials (Part 2, Section III)
   Attendance sheet
   Daily session sheet
   Progress chart
   List of goals
   Student information record

Preparation During Training

The following steps are postponed for the training period, so tutors become involved in preparing what they will use to tutor a student.

Assembling tutor kits. The preparation of kits by tutors includes collecting and arranging supplies ordered in advance: a large closable envelope, a file folder, notepads, rubber bands, pencils, tokens, and boxes. This activity can start the first training day; it includes sorting the three colors of tokens into amounts of 80-100 each and sorting them into boxes. All materials are then located in the kit (large envelope). The Tutor's Guide and other training materials also are placed in a file folder within the kit (see Part 2, Section V).

Preparing student folders. Early in the training program each tutor arranges a student folder. The materials to be included in a large folder are: lesson sheets for pages and chapters (eight of each) arranged alternately for Book 1, vocabulary review sheets kept in a smaller folder (along with cards collected later), and several graph sheets (Part 2, Section V). Materials in these folders will be used for practice early in the training program.

Typing word cards. At least several sets of word cards for Chapter 1 of Book 1 need to be prepared for the first days of training. During training the tutors using the word list may type the rest of the cards for Book 1 (and possibly books to follow). Also, these cards are to be coded on the back according to book number, page number, and paragraph (if the page has been subdivided). Each tutor is responsible for preparing the cards for his set of books. If the tutor has no skill in typing, he can work with another tutor who does; one types while the other codes the cards and arranges them in a file box. Since word cards are not needed for all books at the start, this typing can continue through the program if time is available in the working hours. If not, the training program needs to be extended until cards for all books are typed; this is a total of 1,079 cards for The Morgan Bay Mysteries. If feasible, it is more efficient to prepare these cards using either clerical personnel to type them or offset printing.

Adapting the books. During training each turor is assigned to make changes in his set of books. This involves writing in paragraph numbers on pages that have been subdivided. Subdivisions are given in Part 2, Section I. Adapting books also includes marking which comprehension exercises are to be presented. Changes for some exercises are needed so they are more uniform and clear (revising directions and omitting questions). A list of the changes for The Morgan Bay Mysteries appears in Part 2,

Section I. The alteration of exercises and subdivisions does not take as much time as typing the word cards. It may be done during the training program, or it can extend into instruction as a tutor reads each book before introducing it to the student.

Training Tutors

Schedule for Training

Length. The duration of training varies with the tutors' daily hours and the amount of material to prepare. At least two hours daily is suggested, especially if all word cards need to be typed before instruction. A training program on a two-hour basis may extend about two weeks, followed by on-the-job training. If actual instruction is confined to one hour daily, then three weeks is the estimated duration. The length of training needs to be limited so tutors do not become restless, and so they can soon apply what they have learned.

Sequence of activities. Suggested training activities have been arranged in a daily sequence with 15 divisions for 15 days in a three-week period. These divisions may be adjusted, especially for preparing materials. Experience with four training programs has led to the following sequence of activities which form the basis of a Training Schedule (Part 2, Section V) and Tutor's Guide. Dotted lines show suggested divisions between each day's activities:

Days	Activities
1	Introduction of personnel and employment procedures Training materials: schedule, Tutor's Guide Description of program: purpose, features, tutor's role Outline of procedures of a Book Lesson
2	Background of the program and eight books Materials for tutoring: cards, book, folder, kit Review four parts of a Book Lesson Book Lesson—procedures for one page Single Word Part: if words are known
3	Single Word Part: if words are unknown Instruction on prompting
4	Single Word Part: repeated presentation Instruction on recording responses
5	Oral Reading Part: if words are known Single Word and Oral Reading Parts combined Prompting reviewed and introduced for oral reading
6	Oral Reading Part: if words are unknown Instruction on prompting
7	Oral Reading Part: repeated presentation Instruction on recording responses
8	Oral Reading Part: omissions and additions Single Word and Oral Reading Parts combined
9	Book Lesson—procedures for one chapter Silent Reading Part Comprehension Part
10	Four parts of Book Lesson combined and practiced
11	Vocabulary Review Lesson: procedures for review sheet
12	Reward System: procedures for a graph and choice of goal
13	Sequence for a session Location of records and materials
14	Communication during the program Records on student performance and tutor employment Review of procedures: test and further practice
15	Preparation for the first day Assignment of students to tutors Final review and practice of procedures

Methods for Training

To prepare the tutors, some techniques have evolved from past training programs. These techniques encourage tutors to become active participants at frequent intervals rather than listeners. After the first day there is little lecture-type presentation. The methods can be classified into three general types: demonstration, practice, and performance.

Demonstration. Two kinds of demonstrations have been used—first to introduce a procedure and later to correct observed faults in using a procedure.

After the first quick demonstration of all parts of the reading lesson, each part is demonstrated slowly by the supervisor and one of the trainees. Using the outline of procedures in the Tutor's Guide, another trainee reads one step in the procedure and the supervisor demonstrates the technique; then the group has a chance to raise questions or comment. The next step is read, demonstrated, and clarified through questions or observations by the supervisor (reasons for performing in a certain way and precautions against performing in a less appropriate way).

A different kind of demonstration occurs later in the training. The supervisor deliberately shows incorrect lesson procedures—usually faults observed as tutors practiced the procedures individually. The group is called upon to identify what went wrong in the demonstration.

Practice. Three kinds of practice for tutors can be used during the training program: unison practice by all tutors, alternating practice of tutor pairs within the group, and alternating practice of separated tutor pairs.

After observing a demonstration, all tutors try out the procedure under observation of the supervisor. Each goes through the motions for an imaginary student to increase facility in using the procedure. This is done in a group circle of tables or desks.

Next the procedure is tried out with one trainee acting as tutor and the other as the student. This is a short practice still conducted with trainees sitting within the group circle. The supervisor directs the acting student to respond in certain ways so the tutor has practice in reacting to typical student responses. Questions are discussed by the group and typical difficulties are noted.

Last, the tutors are separated into pairs around the room for a longer practice of the series of steps in one part of the lesson. Each takes a turn at trying out a procedure without the supervisor watching. Mistakes often are corrected by the partner. The pairs are encouraged to ask questions as they go along. The supervisor gives little direction or criticism, since this practice is intended mainly to build confidence in using the procedures independently.

Performance. After these forms of practice, the tutors have several opportunities to perform while others observe. One kind of performance serves as a review of a new procedure the day after it was introduced. A tutor presents the procedure with a partner at the start of a day. Then the other tutors and the supervisor may react to what they see, commenting on what was well performed and criticizing constructively what had not gone so well. This gives tutors a chance to discover what is appropriate performance so they become more aware of improving their own use of the procedures.

Another kind of performance is intended to strengthen use of a series of procedures. Practicing with someone else, the tutor is observed by the supervisor for a period long enough to carry out several steps of a lesson. If difficulties occur, the tutor may be stopped to correct the problem, and a brief discussion follows.

Training Materials

During training materials are introduced that tutors need for carrying out instruction. These are listed in the order they most likely would be presented during the training:

Training schedule (Part 2, Section V). To outline the training program this schedule is distributed the first day. It gives a summary of the activities found in the Tutor's Guide, coming next.

Tutor's Guide. This is the main material used to train tutors. It describes the instructional procedures in detail and indicates methods for learning these procedures.

Reading materials. The books also are introduced the first day with a brief description of content and range in difficulty. Only Book 1 is used for practice of procedures. This book needs to be read by tutors during training. Subsequent books may also be read then if time permits. However, the tutors are usually directed to read these books shortly before they introduce them to their students during the tutorial program.

Lesson and record materials (Part 2, Sections II and III). The lesson materials consisting of lesson sheets, review sheets, and graphs are distributed when procedures for each one are being practiced (according to instructions in the Tutor's Guide). The distribution of record forms occurs near the end of the training when discussing communication about student performance. These materials include the attendance sheet, daily session sheet, progress chart, and list of goals.

Completion of Training Program

Review of procedures. A written check test has been prepared to review some of the tutorial procedures (Part 2, Section V). Once corrected, this review can help clarify specific procedures through discussion of its answers. Also, a review of all procedures can be accomplished with extended practice by tutor pairs on their own, alternating roles of tutor and student. If a tutor continues to have difficulty with procedures, his assignment to a student can be postponed while the tutor continues practice with a partner or the supervisor for several more days. Minor problems with procedures, however, should not delay instruction, for these can be corrected during training on the job.

Preparation for the first day of instruction. To introduce the program to the student the following features need to be explained or demonstrated: (a) the kind of books (mystery theme), (b) the value of tokens, (c) the collection of points on a graph, and (d) the exchange of points for a reward. It is possible for the supervisor to present these points to the students in a group, but it is better for each tutor to explain them to his student. For this introduction the following materials are used: books, tokens, graphs, and types of rewards. For practice, a trial explanation can be conducted between pairs of tutors, so that the introduction is in words most natural to each tutor. Afterward the tutors can outline the topics, so they remember the main points to include the first day. These outlines may be checked for sequence and completeness. Tutors are also instructed to conduct the procedures slowly for the first day and for several days following. This reduces the possibility of procedural errors. It also reduces the points made by students at first. If excessive points are earned at the start, the student may become disappointed some days later by lower earnings.

Assignment of students. The day before instruction the tutor is assigned the student(s) for tutoring. These assignments may be made randomly or by pairing male tutors with boys and female tutors with girls. Such pairing is not essential, for past programs have shown that comparable learning apparently occurs whether or not pairs are of different sexes or different races. After assignments are made, the tutor organizes materials and a folder for the assigned student(s). The tutor should (a) identify a box of cards by student name and number, (b) label a folder by student name and number, and (c) supply the folder with lesson materials (Book 1 lesson sheets, vocabulary review sheets, and graphs). The supervisor supplies fresh sheets for the folders used during training. The student names and numbers are listed on the different record sheets and posted in the storage area before instruction starts. This assignment and listing of students is the last step in the training program.

Supervising the Ongoing Program

Observation of Students and Tutors

At the start of the program the supervisor needs to observe briefly each tutor-student pair. Any major difficulties with the procedures can then be corrected and questions answered. Adjustments in tutor performance are made through conferences and/or more practice. Also, conversation with a student may be necessary to explain how the program works and how it can benefit him—both in learning to read and earning points.

Once the program is underway, a pair may be observed less frequently but preferably for a longer period. This enables the supervisor to notice how the tutor is carrying out specific procedures in all parts of the lesson. Any on-the-job training can then be planned. Also, any problems in students' reading responses may suggest more careful assessment of student performance.

On-the-job Training of Tutors

Conferences. The first step in providing further training is to confer individually with tutors about specific weaknesses or omissions observed during tutorial sessions. Also, these conferences are to recognize procedures being conducted well.

Group meetings. When it is apparent that several tutors have difficulty with the same procedure, a meeting is called to discuss this problem. To start the meeting the faulty procedure may be demonstrated for tutors' reactions; their awareness of the problem can lead them to describe what to avoid. Then the supervisor quickly reviews the correct procedures followed by practice in pairs. In former programs, those procedures requiring further training have been: prompting single words (timing, inappropriate comments), and conducting oral reading (prompting confusion, repetitions, marking).

Assessment of Student Performance

Observation of tutorial sessions provides only impressions of how the student is performing. To gain more exact information the supervisor can use the records of attendance, daily sessions completed, progress charts, and lesson information collected in the student folder. An ongoing evaluation of student performance is thus possible and important for improving the work of tutors and adjusting the procedures for some students. The following aspects of performance need to be checked periodically and possibly discussed with the tutors (sources for information given in parentheses).

Attendance (Attendance Sheet). One of the first indicators of a student's performance is the regularity of his attendance. A quick inspection of the attendance sheet (Part 2, Section III) will indicate whether students are reporting regularly for sessions. One of the stated goals of the program, motivating effort in learning to read, is reflected simply in the regular presence of the student.

A pattern of attendance usually is evident on the attendance sheet within the first month. If the attendance sheet shows frequent absence or tardiness, then the supervisor should try to determine what the causes are. Students who are absent for reasons other than illness need to be observed more frequently for faulty tutor performance or difficulties in the reading tasks such as follow:

Learning vocabulary (Lesson Sheets, Review Sheets, Progress Chart). The number of learned words, the number of trials required to learn these words, and the retention of learned words need to be estimated during the program. This is first done by inspection of Lesson and Review Sheets (Part 2, Section II); then percentage scores from the Review Sheets are summarized on a Progress Chart (Part 2, Section III).

1. Number of learned words

These are the words that were initially unknown and learned during the Book Lesson. From a glance at the Lesson Sheets for Pages it is apparent which students have a relatively large number of unknown words listed under Single Words. These students advance more slowly in the materials because of time needed to learn the words. They may collect a large number of words for review lessons over several chapters. Reviews need to be presented more frequently if the number of words for review continue to exceed 25, or at the most, 30 words. The cumulative total of learned words during the program may be obtained by addition of words appearing under Single Words for all books presented. This total can be taken more quickly from the Review Sheets (as indicated in Part 2, Section III).

2. Number of learning trials

If Lesson Sheets show a student often needs more than three trials (repetitions) for learning a word, then the tutor's work should first be carefully observed. Possibly corrections are needed in the method of prompting single words. If the procedures are being conducted correctly, then many repetitions can indicate some temporary adjustment in procedure is needed.

3. Retention of learned words

How long the learned words are retained is another indicator of student progress. One measure is the immediate retention of single words during oral reading (errors recorded on Lesson Sheets for Pages). If the number of errors per page seems to be increasing (especially above three per page), then tutor performance may need correcting or procedures may need adjusting.

The delayed retention of words is assessed by results of the Vocabulary Review Lessons. The percentage of correctly read words on the Review Sheets is recorded on the Progress Chart. If there is a noticeable decline in a student's percentages, then adjustments in tutor performance or procedures may again be indicated. The

supervisor should be especially observant of the percentage scores for students who initially scored low on the vocabulary reviews (and selection tests).

Comprehension of oral and silent reading (Lesson Sheets for Chapters; Progress Chart). An estimate of comprehension is obtained by inspecting the number of correct answers for each exercise recorded on Lesson Sheets for Chapters (Part 2, Section II). When a number of chapters have been read, changes in a student's understanding are observed in the percentages for correct answers on each chapter exercise. These percentage scores for chapters are recorded on the Progress Chart.

Speed of reading and progressing in materials (Daily Session Sheet; Graphs; Progress Chart). The daily record of completed sessions and chapters provides a rough estimate of the rate a student is covering material. At any point in the program the number of chapters read may be divided by the number of sessions shown on the Daily Session Sheet (Part 2, Section III). These figures obtained periodically provide a more objective estimate of progress rates; they also enable comparison of rates between students. A change in a student's progress through the materials may be observed by the number of chapters read every five sessions; this information is apparent on the graph (Part 2, Section II).

Accumulation of points (List of Goals; Graphs; Daily Session Sheet). The student's punctuality, accuracy of performance, and speed of progression are reflected in the number of points accumulated during daily sessions shown on the graph. These points are collected to exchange for a reward; the goal a student has chosen with its designated number of points is recorded on his List of Goals (Part 2, Section III). These lists are preferably kept in one folder, so the supervisor can check them regularly to determine how near a student is to his goal and to identify goals too great in value to be reached within a reasonable time. The folder of Lists of Goals also provides a reminder to the supervisor when rewards need to be ordered or presented. This folder is left in the storage room where tutors can record new goals.

Observing the student graphs will show any great discrepancies in the number of points earned from day to day. To expedite this observation, the tutors are to record points earned each day on the posted Daily Session Sheet. A sharp decline in points over a number of days indicates closer surveillance and perhaps adjustment in procedures (or token values).

To summarize, this description for gathering evidence on performance suggests how the supervisor may keep informed and thereby identify problems as they occur. Not all of these measures and records may be necessary. What is important for assessment of one student's progress may not be relevant for another's. As the program continues, the supervisor becomes better able to determine which of the foregoing is most useful for following student progress. If time permits, complete records are worth keeping, not only for determining an individual's performance but for comparing the performance of students who differ in initial reading ability.

Adjustment of Procedures

The preceding indicators of student performance suggest action for the supervisor: first, conferences with tutors to improve techniques and then adjustment of procedures if problems continue. An adjustment is made for an individual clearly having difficulty learning and retaining words. The student should not advance into new material until given enough practice on the new words for each page. A few procedures may need adjustment for the group as a whole, but generally changes are made only for individual students. These changes may involve adjustment in lessons for pages, chapters, vocabulary review lessons, or token values.

Change in the lesson for a page. For students who have a low retention of words (shown by many errors on oral reading), there are ways to provide additional time for practice. The progression of reading pages is slowed down by adding reviews of words and by repeating oral reading of pages. First, a step is added to the tutor's duties; during the first oral reading of a page, each word missed is written on the lesson sheet (under Oral Reading). Then after the session these words are written on a review sheet and typed on cards for presentation the following day. The next session begins with a review of words missed the previous day followed by a repeated oral reading of the pages on which these words had been missed.

Usually there is time in the same session to introduce new material. Again the words missed on oral reading are recorded for presentation in a review, and oral reading of these new pages is repeated the following day. The activities for a session then include (a) daily review

of words missed on oral reading, (b) repetition of pages read orally the previous day, (c) introduction of new words, and (d) oral reading of new pages.

One other adjustment in oral reading has been made in both the experimental and adapted programs for students who do not maintain continued attention to reading words in sentences (losing their place, looking away, skipping words). The tutor is instructed to point to each word as the student is reading orally; the pencil is moved along steadily at the rate the student normally reads. If there is an error in oral reading, the pencil stops on the word; this serves as a prompt for the tutor to supply the right pronunciation (if the student does not correct his error).

Change in the lesson for a chapter. One purpose of rereading a chapter silently after oral reading is to increase speed, so a student's rate will not remain the speed of vocalization. Also, silent reading provides an opportunity to review the chapter for facts that are tested in the comprehension part. Close supervision needs to be given those students who lose attention in the longer task of reading a chapter silently. The following adjustments can be made depending on whether the reader tends to be fast or slow:

1. For faster readers who skip over the silent reading,

   a. A pacing technique may be added to develop even attention and increase reading rate. If a mechanical reading pacer is available, this can be helpful for attention and rate. If none can be obtained, the tutor may use a card, moving it down the page above the lines that the student is reading.

   b. The number of tokens may be reduced temporarily to one-half the total for the number of pages. The student is informed that he only earns the full number of tokens when he reads the pages thoroughly.

2. For slower students who extend the silent reading,

   a. The student may be required temporarily to read the chapter orally. This is especially needed if it has taken more than a week to complete the single word and oral reading parts of the chapter—due to absence or slowed down procedures. This review is necessary to achieve accuracy in answering the questions. The students are trained for complete oral reading of the chapter and later return to the more efficient silent reading—with the tutor's statement that thorough silent reading is necessary to earn points for each page.

   b. Those students having the most difficulty may omit temporarily any repetition of the chapter. Instead the lesson time is devoted entirely to the procedure for pages, with the changes recommended above (daily reviews based on oral reading errors and repetition of pages the following day where these errors were made). Words on the second oral reading are also recorded and presented in a review before the student goes on to the next chapter. The only silent reading is during the comprehension part.

Change in the vocabulary review lesson. For a few students the frequency of reviews may be increased temporarily. If a student not only has a long accumulation of unknown words but also many errors in oral reading, then the interval between reviews can be shortened to one every two chapters. This allows the student more opportunity to learn the unknown words before they are met again in the succeeding chapter. This student would be given four reviews per book instead of two.

One minor change can be made for students who need many repetitions (over three) to learn new words. For these students the review words are divided into groups of ten for presentation. As soon as ten have been presented, the repetition to learn the words is conducted before the next ten words are presented.

Change in tokens. Sometimes the adjustments just described result in a lower number of points earned each session. Any change in the token system needs to be cautiously considered and instituted mainly for individual cases. If a definite decline in the daily points is evident, the value of the tokens can be increased for a student so his daily total is comparable to that earned by students under the regular procedures. The value of a yellow token may be increased from 2 to 3 points and/or a red increased from 3 to 5 points.

An increase in red and yellow token values for the entire group of students would be indicated mainly if the length of sessions is expected to be 30 minutes or less. If a definite decline in daily points occurs for most students after advancing into more difficult material, an overall change in token values may be warranted. If it also appears the interest of students is lagging because of lower daily points or longer time required to reach a goal, then an increase in token values could be made. An increase of the red token (3 to 5 points) would encourage more accurate responses in oral reading and comprehension questions. Increasing the yellow token as well would generally reinforce effort on all parts of the reading lesson.

It is preferable, however, to make no change in token values for the group. A gradual decrease in points earned each session is appropriate as a student advances in the program; he is then giving more reading responses for less token reinforcement. This is the intent of the behavioral modification approach; extrinsic reinforcement decreases as other forms of reinforcement increase (e.g., social approval, grades).

In summary, to make any adjustments for individuals, careful observation of performance and records is required; first, to determine which change should be made and then how long the change should remain in effect. Adjusting procedures needs to be restricted to a small number of students. If selection of students has been made according to the previous criteria, then few, if any, adjustments in procedures are necessary.

Communication With School Staff and Parents

Oral communication. At the start of the school year the tutorial program is organized mainly through discussions with school administrators, counselors, and teachers. During the program short conferences with the school staff may be necessary when problems arise. It is especially helpful to keep in contact with the teacher from whose class a student has been removed. The supervisor's description of behavior and reading progress in the tutorial program may give a teacher new information on a problem student; they in turn may provide additional facts about the student as he performs in the classroom.

Near the start of the program a phone contact with the parents of each student is useful for gaining more information and for telling parents of a student's participation in the program. Later it may be possible to speak with parents directly during visits to school or a conference day for parents and teachers. Home visits by the supervisor also are indicated, especially for families with no phone. Lesson materials from the student folder are helpful in reporting a student's progress in the program in all of these contacts.

Written communication. At the start of the school year a brief written description of the program submitted to administrators (and teachers) can inform them of such aspects as objectives, materials, procedures, personnel for tutors, kinds of students selected, daily schedule, and means of evaluation. Written communication from teachers and counselors is helpful in identifying students, as already described (behavior difficulties in the classroom among low readers).

Once a student has been selected, he provides written communication about himself on a Student Information Record (Part 2, Section III). From these records the parents' names and addresses are obtained so letters may inform them of their child's participation in the tutorial program. A sample letter to parents (Part 2, Section III) also indicates how a parent may continue the communication with the supervisor. At the end of the school year another letter may be sent to report informally on the student's progress. A more formal report to the parents is a report card grade. Grades can be based on the regularity of attendance, tardiness, rate of progress through the materials, number of words learned, and percentage correct on vocabulary review lessons and comprehension questions. This information is obtained from the Attendance Sheets and the Progress Chart (Part 2, Section III). The level of reading achievement relative to grade placement should not be the basis for grades.

Reporting to the school staff and central administration at the end of the school year may include the following records on student progress: attendance records, records of sessions and books completed, number of words learned, plus percentage scores on reviews and comprehension exercises. Also, the results of standardized tests (comparing pre- and post-test scores) may give some estimate of students' progress in the tutorial program, particularly if individual test measures are used. Conclusions from such scores, however, are unwarranted unless the program has been planned with a formal research design.

Oral and written communication about the program occurs mainly at the start and close of the school year. During the course of the program the supervisor concentrates on these

major activities: observation of sessions, further job training, a check of records, and assessment of student performance (Progress Chart). If time is limited for all these activities, then some may be reduced. At the minimum, supervision should include a regular check of record sheets and periodic observation of the tutors assisting their students to improve reading skills.

Description of Adapted Programs

Appendix A
1968-69 Adapted Program

Adaptation of the Staats procedure was started in the 1968-69 tutorial program at Fulton Junior High School by adjusting this procedure to different materials (Morgan Bay Mysteries). A preliminary trial of methods using mystery books was conducted in the spring and summer of 1968 with two students. Then the procedure was used with 27 students during the 1968-69 school year. Following is a description of this tutorial program, given in detail since the specific conditions of the program were underlying the preparation of the supervisor's manual.

Tutors

For the adapted program there were 12 tutors (two teacher aides and ten senior high school students) supervised by the reading teacher. The aides' average age was 28 years, and each had 13 years of schooling. These full-time aides were each assigned to tutor five students. Their other duties were to help train the high school tutors, substitute for absent tutors, record information on the tutorial sessions, prepare materials, and consult with the reading teacher about the students' progress. The teacher aides were paid $2.15 an hour through funding of the Wisconsin State Board of Governmental Operations.

The high school students had an average age of 16.7 years; their grade placement was a mean of 11.2 at the start of training. Two boys and eight girls were selected from about 60 applicants. On the reading test of the WRAT-Level II the mean score for these students was 8.1 reading grade level. All but one of the students had work experience. Regarding their plans for the future, three students wanted to enter a trade school and seven planned to go to college. One of these hoped to become a teacher.

Each high school tutor was assigned one student during his study hall period. The tutors' duties included conducting the reading procedures and recording information on student performance. Employment was for two hours a day, one hour for tutoring and one hour for completing records and preparing word cards. The tutors were also given home assignments: reading the mystery books, completing their exercises, and preparing generally for jobs by reading a book entitled Jobs in Your Future by Lee (1967). These tutors were paid $1.30 an hour through funds from Neighborhood Youth Corps.

Students

The following characteristics of 27 students in the remedial program indicate some multiple handicaps: minimal reading skills, limited mental abilities, difficulties in social-emotional adjustment, experiences of academic failure complicated by absenteeism, and home environments that give inadequate support to the child's development. The class behavior of these students was generally disruptive and/or unproductive. The Staats procedure was intended for students having such characteristics. The question during the year was how to adapt the procedure so that it would continue to increase these students' attention to learning activities, sustain their effort by reinforcement of reading performance, and eventually develop growth in reading achievement.

Reading and Mental Abilities

Results of the Gates-MacGinitie Reading Test—Survey D, conducted in the fall of 1968,

indicated low achievement levels for the 27 students: comprehension mean score 2.7 grade equivalent and vocabulary mean score 2.9 grade equivalent. The latter score was supported by a mean score of 2.9 on the WRAT-Level I (oral recognition of vocabulary). These scores indicated the students were an average of four and one-half years below the expected reading achievement for their grade placement when the program began in December, 1968. At this time the average age of the 27 students was 14.2 years. The available IQ scores indicated that their mental age was considerably lower than chronological age. Information on group IQ scores was incomplete, although an individual test (WISC) had been administered to over half the students (16 of 27), and showed an average IQ of 76. Eight of these students were recommended for placement in classes for the educable mentally retarded. These reports also showed emotional problems for 10 of the 16 students.

Scholarship and Attendance

School records for 20 of these students were available for the semester prior to entering the program. General underachievement was evident from the grades received in June, 1968; the average grade point was .979 (less than a D average for all subjects).

Recorded absences for this semester indicated these students missed an average of 17 days out of 90, the highest number being 59 days. There was evidence of truancy for at least 11 of these students. Tardiness for this period was an average of six days, the highest number being 14 days.

Home Conditions

The students generally came from large families. From 18 available records there was an average of six children per family with 11 children being the highest. A little over half the students lived with one parent. Inadequate supervision or care in some homes was indicated by the number of social welfare referrals; 12 of the students had been referred to a social welfare worker (usually two or more times).

Behavior in School

Anecdotal records written by the junior high teachers were surveyed for behavior exhibited in the classroom by these students. Two types of comments were classified: those indicating disruption of classwork and those showing deficiency in effort to learn. Of 27 students, 18 were regarded as disruptive in class. The behavior included "excessive talking," "playing around," "rowdiness," "defiance," "fighting with students," and "assault of a teacher." Fifteen students also had a record of suspensions from school for violating rules. In two cases the severity of these violations required transfer to a boys' reform school before the end of the year.

Deficient effort in learning was shown by 18 students. A low level of effort was indicated by comments such as, "doesn't try," "needs constant prodding," "is inattentive," "completes no assignments." Out of the 27 students, 23 fell into one or both categories—deficient in effort and disruptive—behaviors for which the Staats procedure was especially designed.

Estimates of the Program's Effectiveness

Developing materials and methods while a program is underway means continual adjustments. These variations make it difficult to consider the population as a whole in assessing the effect of the program. Information on student performance is therefore presented with reservations, as indicative of what happened for certain students, rather than what may have been the effect of the entire program. The objective information is followed by subjective impressions about the students. Also included is a description of how tutors performed. This discussion may suggest the effectiveness of a similar tutorial reading that is planned with an evaluation design.

Student Performance

Reading score results. Pre- and posttest results were available on a silent reading test for 19 of the 27 students. These incomplete scores for the Gates-MacGinitie Reading Test—Survey D, indicated a mean gain of four months in comprehension (2.8 to 3.2) and three months in vocabulary (3.0 to 3.3). This was accomplished in an average of 2.2 months of steady instruction. The validity of the silent test scores appeared uncertain; the tests seemed too difficult for some students, and random marking was observed during testing. More reliance could be given the individual test results on the WRAT. Pre- and posttest results were again incomplete, but scores for 14 of the students indicated a mean gain of six

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months (3.0 to 3.6). For a selected group of those eight students who completed the most chapters, the mean gain on the WRAT was one year. Therefore, the rate of gain over 3.5 months of instruction for these students was 2.8 months of reading growth for each month of instruction. This would be almost three times the gain expected for the length of instruction. The acceleration in reading achievement could be partially attributed to practice effects in taking the WRAT twice within a year. A research design would be necessary to determine whether this is a possibility and whether the results have some level of significance.

The test results, besides being incomplete, included many uncontrolled variables. For instance, there were differences between students tutored by aides and those instructed by high school tutors in selection, instruction and attendance. Irregular student progress because of procedural adjustments and irregular tutor attendance also would confound an attempt to measure the effectiveness of the program in terms of the total group's performance. Entrance and exit dates varied as well as criteria for selection; during the year students were added when openings existed or when students volunteered to come after school. The program was regarded as a service to students with reading problems and an opportunity for discovering how to adapt methods and materials, rather than a controlled study of one population or one instructional approach.

Record of performance in the materials. The information recorded on daily lessons yielded more specific evidence of student progress than test scores. Tabulation for all students was not attempted. Instead, examples of individual performance were collected, suggesting the kinds of data that could be gathered from all students in this tutorial program.

1. Vocabulary learning

a. Number of trials needed to learn one word

Evidence readily showed that students varied in rate of learning words. For example, over a period of five sessions with the same material, one student needed an average of 1.1 repetitions for learning a word, compared to an average of 3.9 repetitions for another student.

b. Number of words learned

Students also differed in the total words learned during the program as well as in the average number of words learned per session or per chapter. Following are examples of two students having the same number of sessions:

	Total words learned	Average number of words learned per session	Average number of words learned per chapter
Student A	268	3.7	5.6
Student B	368	5.0	12.1

Student B spent more time learning words than progressing through the books; he read only 30 chapters compared to 48 chapters read by Student A.

c. Retention of words learned

Delayed retention was measured by figuring the percentage of initially unknown words read correctly on a review lesson. For example, two students differed from 79% to 89% in retention of the same number of unknown words. Most students appeared to retain 80% to 90% of the words on delayed presentation.

2. Comprehension

An estimate of understanding in oral and silent reading was seen by the percentage of questions answered correctly. Several students showed an increase in the percentage of correct answers to questions:

	Initial score Gates-MacGinitie	Total books read	First book	Last book	Average per book
Student A	2.5	6	90%	94%	90%
Student B	3.0	5	90%	92%	90%
Student C	3.5	7	88%	100%	93%

The impression was that other students maintained or increased the percentage of correct answers through the program despite the increasing difficulty of materials.

3. Speed in reading

Speed as measured by number of words read is estimated by dividing the total number of running words in a book (Appendix D) by the number of sessions. Two students who had the same number of sessions showed an increase in total words read per session:

	Words Read Per Session		
	Book 1	Book 2	Book 3
Student A	1632	2168	2366
Student B	668	892	1068

The increase in speed for student A is notable because he was considered the most severe behavior problem in the classroom; he did no assignments and caused trouble. A spot check of seven other students also showed a similar increase in reading speed.

Of additional interest is the rate of progress through larger units of reading material, as gauged by the number of chapters a student completes during a certain number of sessions. A standard measure could be calculated by the number of chapters read every five or ten sessions.

Impressions of behavior. Students identified as having behavior problems showed practically no evidence of such problems in the tutoring situation. Those who were insolent and belligerent in the classroom were cooperative when tutored. Other students known for a lack of interest in classroom learning showed sustained effort in the tutorial activities. Also, those students with a record of low attendance and truancy reported regularly for tutorial sessions. Tardiness to sessions was a problem for some students during the program.

These impressions of behavior hold true both for the students assigned to high school tutors and those assigned to teacher aides. Difficulties sometimes arose when students were reassigned to a substitute high school tutor. There were notable instances of good rapport established between the senior high tutors and junior high students. In several cases a reassignment of tutor was made if a working relationship was not adequate.

It was generally observed that students maintained attention to reading tasks during a session and continued the effort over a period of sessions. This appeared to be related to their interest in earning many points each day and working for a goal. The motivation of some students was especially apparent in their willingness to stay after school to complete more reading. Others even came for after-school sessions. A considerable number of students expressed to the tutors their satisfaction in both earning something and learning something during the tutorial program.

Tutor Performance

The teacher aides were especially careful and concerned about performing their duties, as shown in regular conferences with the reading teacher. One aide had experience in the program for three years and could consult with the high school tutors about their work. The other aide was given informal training in the procedures and assumed well the responsibilities for tutoring.

The high school tutor group became quite cohesive through the year. The tutors showed interest in reading themselves and asked to withdraw books from the Reading Center Library. Without encouragement they continued to check out books through the second semester—an average of six books read per tutor. This show of interest in reading led to administration of a follow-up reading test to the tutors at the end of the year. The mean gain on the WRAT for these high school students was an increase of two years, six months. Possible the tutors' experience in reading instruction and their additional reading accounted in part for this gain.

Appendix B
1969-70 Adapted Program

During the 1969-70 school year the tutorial program came under ESEA-Title I funding and evaluation. The seventh-grade students selected for the program were four to six years below their grade placement in reading achievement and known as behavior problems in the classroom. These students were evaluated in a control group design with pre- and posttest comparison of reading scores. The following description of the program and results was drawn primarily from the evaluation report prepared by the Department of Educational Research and Program Assessment—Division of Planning and Long-Range Development in the Milwaukee Public Schools.

Tutors and Students[1]

Number

Two teacher aides trained in previous years were available for this year's program. Each aide could tutor six students daily, so a total of 12 students participated in the experimental group and 12 more remained in a control group. Later in the year another aide was assigned, enabling six more students to participate.

Selection Criteria for Students

To locate a population appropriate for the instructional procedures the only students considered were those who scored between 2.0 and 3.0 grade equivalent on a silent reading test (the Nelson Silent Reading Test given to 19 seventh-grade sections). From these students the teachers responsible for each section selected the three who demonstrated the most severe behavioral problems during the first month of school; these students were ranked first, second, and third in order of severity. All of these students were tested further by an individual test (WRAT-Level I). Those who scored below or above the 2.0 to 3.0 range on this test were no longer considered. The 24 first-ranked students who met the test criteria were randomly assigned to experimental and control groups.

Instructional Program and Goals

The tutorial instruction used the same materials (The Morgan Bay Mysteries) as in the previous year, supplemented by additional lesson materials, word cards, and rewards. The procedures were those developed in 1968-69 with refinement of methods for vocabulary reviews, token reinforcement, and adjustments for students experiencing difficulty. The reinforcement system was again supported by the three private firms that had offered financial contributions previously. The rewards were food, records,

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[1]The grade levels of both students and tutors varied in programs following this 1969-70 school year. In the 1970-71 program, the seventh-grade slow readers were tutored by ninth graders from the same school. Supervision was facilitated by more accountability of the tutors. The use of younger tutors of average ability seemed workable with this structured kind of program. Its three objectives were met as reported in the Title I ESEA Evaluation 1970-71 (published by the Department of Educational Research and Program Assessment, Milwaukee Public Schools). The plans for the 1971-72 school year included a younger population of students for tutoring. These would be children selected from Grades 4, 5, and 6. They would be tutored by high school seniors serving as volunteers.

and catalog merchandise.

The purpose of this program generally was to increase reading ability of low-achieving students who had behavioral difficulties in the classroom (e.g., uncooperative, passively resistant, belligerent). Specific goals of the program were stated in three behavioral objectives:

1. To increase reading achievement by three months (based on WRAT scores),
2. To attain mastery of at least 125 Dolch words or to increase their recognition by 20 words, and
3. To reduce the number of disciplinary referrals.

Results of the Program

Reading Score Results

In the Title I ESEA Evaluation (1969-70), scores for the experimental group were reported to assess these objectives.

For Objective 1 the predicted increase of three months on the WRAT was actually a six-month gain in the mean score for students in the experimental group (comparing the pretest grade equivalent of 2.38 with the posttest mean of 3.02).

For Objective 2 the predicted increase of 20 words was actually an average of 24 words for the experimental group (pretest mean of 180 words compared to posttest mean of 204 words). The increases for Objectives 1 and 2 were reported significant at the .01 level. The experimental group doubled the increase of the control group on the mean WRAT score and it exceeded the control group by an average of 14 words on the Dolch Basic Sight Words.

For Objective 3, the total number of referrals for disciplinary action was lower for the experimental group than the control. In both groups five students had been referred to the administrator's office, but for the five students in the experimental group there had been nine referrals as compared to 21 referrals in the control group.

A further evaluation of posttest results using multiple regression analysis is shown in the following table. The mean scores for both groups were adjusted for variables of attendance and the pretest scores on the Nelson Silent Reading Test, WRAT, Gray Oral Reading Paragraphs, and Dolch Basic Sight Words (N = 21, X = 11, C = 10):

		Adjusted Means		
Criterion	R^2	X	C	F ratio
WRAT	.5613	3.13	2.77	1.5183
Gray	.5673	2.73	1.99	6.3503*
Dolch	.7639	208.63	193.61	6.5378*

X = experimental group
C = control group
*Significant at the .05 level

A concluding statement in the Title I ESEA Evaluation report indicated that a "comparison of the equated groups revealed significantly higher mean scores for the tutored group on the Gray test and Dolch Basic Sight Words. The Staats 'Motivated Learning' Reading Procedure resulted then in significant gains in word recognition and comprehension."

Record of Performance in Materials

Since analysis of student performance was intended through the ESEA research design, less information was retrieved from student lesson records than in the previous year. The basic information is the amount of instruction for the experimental group in terms of numbers of days and chapters completed. The 12 students were tutored for a mean number of 85 days (ranging from 60 to 116 sessions). Four students completed all eight books in the program (64 chapters). The mean number of chapters completed by the group was 53 (ranging from 39 to 64 chapters). It was apparent that the diversity in number of days and chapters completed by students might complicate interpretation of test results. Further investigation on the effects of this tutorial program would be useful if the number of sessions or chapters could remain constant. Then it would be possible to determine what performance might be expected by either completing all materials in the program or participating in it for a standard length of time.

Revisions in the Adapted Programs

Appendix C
Tutorial Procedures

Description

The description of these adapted procedures includes the activities as revised for use with The Morgan Bay Mysteries. A description of the original Staats "Motivated Learning" Reading Procedure can be found in several sources (see Introduction).

Any departure from the experimental materials and methods may have some different consequences for learning behavior and the related token reinforcement. The intent, therefore, is to maintain at least those procedures similar to the original, as follows:

Book Lesson

This outline includes the four lesson parts for a chapter and the subdivision of a page. Each part involves a presentation of reading materials and an award of tokens with possible repeated presentation and award.

1. Procedures for a page

a. Single words

(1) Presentation
—The words are presented on cards at timed intervals.
—The student tries to read each word aloud.
—The tutor reacts to whether the response is correct by prompting or praising the student.

(2) Award of tokens
—One yellow token is given for each correct word.

(3) Repeated presentation
—The missed words are presented again to be read aloud.
—The words still unknown are prompted and then presented again until the student reads them without prompting.

(4) Award of tokens
—One blue token is given for learning each word.

b. Oral reading

(1) Presentation
—The student reads sentences on a page aloud.
—The tutor reacts to whether words are read correctly by prompting those pronounced incorrectly or hesitantly or praising the student for reading the page correctly.

(2) Award of token
—One red token is given for reading the page correctly.

(3) Repeated presentation
—The student rereads sentences containing words that were pronounced incorrectly or hesitantly.
—The tutor prompts words that still are incorrect.
—The student continues to repeat any sentence still containing missed words until read without prompting.

(4) Award of token
—One yellow token is given for correcting words on page.

2. Procedures for a chapter
The procedures for the single words

and oral reading are repeated for each page in the chapter. When a student has reached the end of a chapter, the last two parts of the lesson are conducted:

a. Silent reading

(1) Presentation
—The student reads the chapter silently.
—The tutor observes if reading is thorough and assists with words if necessary.

(2) Award of tokens
—One yellow token is given for each page read.

b. Comprehension questions

(1) Presentation

—The tutor reads the directions for the questions.
—The student answers the questions on an answer sheet.
—The tutor checks the answers and indicates if they are correct or not.

(2) Award of tokens
—One red token is given for each correct answer.

(3) Repeated presentation
—The student reads again each question answered incorrectly.
—The student writes the new answer next to the former one.
—The tutor checks answers; if some are incorrect, the student continues to choose an answer until all are corrected.

(4) Award of tokens
—One yellow token is given for correcting each answer.

The Vocabulary Review Lesson

A central part of the Staats procedure is review training on new words. Repeated trials are given for these words with the prompting technique and token reinforcement. One purpose of the review lesson is to evaluate the delayed retention of initially unknown words. The review also provides practice for forgotten words before the student proceeds to new material.

The review lesson occurs after the student completes Chapters 1 and 5 in each book. The tutor collects the cards for unknown words in a separate pack; these words are also written on a vocabulary review sheet. After the designated chapters, the review lesson is conducted with procedures similar to those in the single word part. The word cards that cannot be read spontaneously are separated from the correct words and then practiced. The tutor records them on a new review sheet for presentation later along with words collected from the next four lessons.

The Reward System

An integral feature of the Staats procedure is a system for motivating students using tokens awarded for each kind of reading response. These tokens of three different colors have monetary value, so they can be exchanged for a reward worth a certain amount. The color of the token indicates its value in points or money:

—blue, 1 point or 1/10¢
—yellow, 2 points or 2/10¢; 3 points or 3/10¢
—red, 3 points or 3/10¢; 5 points or 1/2¢

During a session the tutor distributes tokens and records the token numbers on the lesson sheet. At the end of a session these numbers are totaled, converted to point values, and transferred to a bar graph that depicts the accumulation of points over five sessions. The student participates in this activity by shading in the space showing his total collection of points—those earned for the day added to the past total. The tutor comments upon the total and relates it to the goal chosen by the student. The total points can quickly be changed to their monetary value by moving the decimal point one place to the left, e.g., 140 points = 14¢. When a reward is given, its value is subtracted from the total points; the remainder is carried over for the next reward.

In the adapted programs the kinds of rewards were foods, records, and merchandise from a department store. The addition of a catalog to the reward system was advantageous for giving a wide range of choices and helping the student visualize the goal.

Adaptation

Differences between the experimental and commercial materials required some adaptation of the Staats procedure. The changes are listed

to show how the adapted procedures differed from the original procedures. The reasons for adapting the procedures follow.

Book Lesson

1. New words were presented at the beginning of every page—rather than at the start of the lesson unit.

2. A page became the main unit for oral reading—rather than a paragraph.

3. To correct an error in oral reading, the student reread the sentence in which it occurred—rather than the entire paragraph or page.

4. To correct an error on a question, the student reread the question—rather than material from the story context.

The reason for presenting new words by pages was that lessons (chapters) in The Morgan Bay Mysteries were quite long; it might take several days to complete a chapter lesson. Pages, however, were introduced each day, so new words could be presented daily. The change from a paragraph to a page as the unit of oral reading occurred because extensive dialogue resulted in paragraphs too short and uneven in length to serve as reading units. Correcting word errors by rereading sentences only was due to the lengthy unit of a page; it was unrealistic to require rereading of a page simply to correct a word or two. Correcting errors in questions also did not include rereading pages, since verification of the correct answer could not always be located in chapter material.

Vocabulary Review Lesson

1. The reviews became more frequent with the interval between reviews based on chapter divisions.

2. Words missed on one review were carried over to the next review.

One reason for having reviews more often than every ten days was the higher initial reading level of The Morgan Bay Mysteries (2.3 compared to the experimental materials of 1.2). Also, there was less reading material on the lower levels, so slower readers experienced difficulty more quickly than was true in the experimental materials (which had 132 lessons on levels 1.2 to 2.3). The Morgan Bay Mysteries introduced 287 new words on the 2.3 level and then immediately advanced to a 2.6 level. This reduction of reading material also required a carry-over of words from one review to the next, providing more assurance that words were learned before the student started more difficult material.

During the 1968-69 trial program, students had review lessons at an interval of every five sessions. After this trial program it was apparent that the time interval for reviews was inappropriate for use with The Morgan Bay Mysteries. In these books the distribution of new words is uneven through a book; the largest number of new words occur in Chapter 1 and then rather quickly diminish through the remaining chapters of each book. Few and sometimes no new words occur in Chapters 6, 7, or 8. The distribution of words by chapters for the eight books appears in Table 1.

An alternate schedule for presenting reviews was tried in 1969-70, according to divisions of chapter material. One review was given for every two chapters read, after completion of Chapters 1, 3, 5, and 7. Conducting reviews after the odd-numbered chapters was determined by the need to review the many words introduced in Chapter 1; in Books 2-8, the Chapter 1 review included new words from Chapter 8 of the preceding book (see Table 2). Four reviews per book seemed often enough and even too often for many students. For the unusually slow student four reviews would probably be needed. For the typical student it was concluded that two reviews per book would be sufficient, given after Chapter 1 and Chapter 5. Table 3 shows the number of words each review would include.

Reward System

1. The means for distributing rewards was changed from cash to a redeemable card or letter worth the value of an item in a store.

2. The point value of tokens was altered somewhat to allow for differences in materials and restriction on funds.

Practicality was the main reason for these changes. Cards redeemable at a contributing store were used because no cash funds were available for rewards. Even had they been, distribution of money in school was questioned by some administrators. Whereas cash could be used to buy anything, the redeemable cards provided assurance that a student would get

Table 1
Distribution of New Words:
Number of Words Introduced Each Chapter in the Eight Books

Book	Chapter 1	Chapter 2	Chapter 3	Chapter 4	Chapter 5	Chapter 6	Chapter 7	Chapter 8	Total
1	225	28	22	7	2	1	3	1	289
2	74	6	11	8	2	6	0	0	107
3	50	10	20	5	7	1	3	1	102
4	36	14	9	5	9	3	5	1	82
5	44	30	8	10	3	0	0	0	95
6	55	39	29	15	2	7	0	0	147
7	54	41	18	5	10	5	0	6	139
8	52	17	23	15	7	2	1	1	118
									1,079

Table 2
Distribution of New Words:
Number of New Words Covered by Vocabulary Reviews
Four reviews given for each book after Chapters 1, 3, 5, and 7

Book	Chapter 1 plus Chapter 8 of Previous Book	Chapters 2 & 3	Chapters 4 & 5	Chapters 6 & 7
1	223	50	9	4
2	72	17	10	6
3	49	30	12	4
4	37	23	14	8
5	44	38	13	0
6	56	68	17	7
7	54	59	15	5
8	58	40	22	3

Table 3
Distribution of New Words:
Number of New Words Covered by Vocabulary Reviews
Two reviews given for each book after Chapters 1 and 5

Book	Chapter 1 plus Chapters 6, 7, & 8 of Previous Book	Chapters 2, 3, 4 & 5
1	223	59
2	76	27
3	55	42
4	41	37
5	52	51
6	56	85
7	61	74
8	63	62

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only the object he chose as a goal. The card was validated by the supervisor's signature and given a time limit within which it was effective.

While the program was being adapted, the tokens were both increased and decreased from the original values. In 1968-69 the red was lowered from 5 to 3 points due to a limited number of contributions from pirvate firms. The lower token value was not sufficient for some students whose initial reading level was low; they were getting less than 40 points (4¢) daily. For these students each token was increased by 1 point in value. Later on some students slowed by the harder books received an increase of the red token to 5 points. In the 1969-70 program, observation of students about halfway through indicated it would be better to increase the red for all students from 3 to 5 points. One month later the yellow was also increased—from 2 to 3 points.

It is recommended that these higher values be used (if reward contributions are sufficient). To avoid the unusually high accumulation of points at the start of the program tutors could be instructed to proceed very slowly during the first week or so. Another alternative would be to start students on the lower values (red = 3, yellow = 2, blue = 1), then increase the red to 5 and the yellow to 3 when each student reaches a certain place in the books—preferably the end of Book 1 or Book 2.

Appendix D
Instructional Materials

Description

In hopes of retaining the main features of the Staats procedure, the selection of commercial reading materials was made on the basis of similarity to the experimental material. The choice was The Morgan Bay Mysteries by Rambeau and Rambeau (1962-1965). The experimental materials were story lessons modified from SRA Reading Laboratories Series (Ia, Ib, Ic, and IIa).

The Morgan Bay Mysteries have the following similarities to the experimental lessons:

1. Index of new words
2. Uniform format throughout the materials
3. Questions spaced at periodic intervals
4. Graduated reading difficulty through the materials

Each of these similarities is now described to show why it is important to lesson procedures. Some other characteristics favoring selection are also noted.

Index of New Words

Each volume of The Morgan Bay Mysteries includes a word list that gives the page on which each word is first introduced. This makes possible the identification and listing by page number of all new words. These words may then be presented to a student before reading a given page. Such presentation constitutes the first part of the lesson—Single Words. It is essential to the Staats procedure that a student learn to recognize individual words before meeting them in context. A student completing all books would be introduced to 1,079 different words (Table 1, Appendix C) with training on the number of words that are initially unknown.

Uniform Format Throughout the Materials

Each book in the series has the same format: division into eight chapters that are nearly equal in length for each book. The chapter division represents the unit of a lesson. The unit of a chapter makes possible two other parts of the lesson in the original procedures, Oral Reading of the chapter in page-by-page sections, and Silent Reading of the chapter as a whole. A student who reads the eight chapters of all eight books will then complete 64 lessons (chapters). Between books there is a gradual increase in number of pages for a chapter—going from an average of six and one-half pages per chapter in Book 1 to nine and one-half pages in Book 8.

Questions Spaced at Periodic Intervals

Another element important in the experimental procedures is the regular check of a student's comprehension. The Morgan Bay Mysteries provide questions at chapter intervals throughout the series; this provision is rarely found in developmental readers and is one of the key factors favoring selection of this series. The questions answered at the end of each chapter constitute the part of the lesson for Comprehension—the last of four parts in the procedures used with the experimental materials.

Graduated Reading Difficulty Through the Materials

In several ways the reading difficulty gradually increases through the series. The reading levels for the eight books proceed from 2.3 to 4.0 with a two- or three-month increment be-

tween books (with the exception of the same level for Books 4 and 5). These reading levels seem appropriate for a junior high student three to five years below grade placement in reading. The authors, Rambeau and Rambeau, stated in the Teacher's Handbook (1965) that the books "are keyed to the abilities of pupils with second- and third-grade reading skills."

The gradual increase in difficulty is also apparent in carefully controlled vocabulary. The number of different words per book slowly increases throughout the series and so does the difficulty of the words themselves (details in Table 4—the publisher's Technical Aspects of the books). In this table, the vocabulary breakdown shows easier words (Level I) in the first books of the series with more difficult words (Level IV) gradually increasing in the last books of the series. Also there is frequent repetition of the new words once introduced.

In addition to the increase in different words there is an increase in total running words per book, growing from 7,348 to 13,379 words between Book 1 and Book 8. A progressively greater number of words per chapter occurs from one book to the next, since the number of chapters in each book remains the same. Thus, a student reads a greater amount of material for each chapter unit, although the token reinforcement for reading these units remains the same. This is in keeping with the Staats design for reinforcing reading responses—more reading required for each token reinforcement as the student progresses, so that the actual amount of reward for each reading response is gradually reduced.

One other factor favored the selection of The Morgan Bay Mysteries for a junior high reading program. The books are written with a high maturity level appropriate for adolescents, though the reading level is low in difficulty. The authors' statement in the Teacher's Handbook (Rambeau & Rambeau, 1965) indicates that the mysteries are particularly intended to suit retarded readers with more mature interests:

> ...their inconspicuous but effective use of word repetion, their "adult" appearance and approach...all these factors make The Morgan Bay Mysteries ideal for those older pupils (from fourth- through ninth-grade levels) whose interests and aptitudes are well in advance of their reading skills. (P. 9)

Also, the literary form of serial mysteries has a more adult appearance; a similar theme of setting and characters follows through the eight books in the series. The elaborate plot development with clues and intrigues is another appealing feature for junior high readers.

Adaptation

Several changes in the books themselves have been made so they better fit the basic procedures. Other adaptations involve supplementing the books with additional materials.

Subdivisions of Pages Into Paragraphs

One change is simply marking off paragraphs on a page to provide smaller units for oral reading at the beginning of the first three books. This results in more units of oral reading in these earlier books so the average number of words per unit is low and gradually increases from one book to the next, as shown in Table 5. Also, by subdividing pages the number of new words for each unit of oral reading is limited to no more than ten words (with the exception of 14 in one instance). If pages were not subdivided, the number of new words for a page at the start of a book would be too numerous to learn in one presentation (as many as 58 for page 1 of Book 1). Thus, it is necessary to subdivide pages into paragraphs for oral reading at the beginning of books as specified in Part 2, Section I.

Adaptation of Comprehension Questions

The questions in exercises for each chapter vary in number, length, and kind. Exercises which are objective and quickly answered have been selected for each chapter and marked in the books. By this selection, the number of questions for each chapter has also been somewhat equalized. Making the exercises more uniform in length is necessary so that the token system provides nearly equal reinforcement for answering questions correctly. With these changes the total number of questions for a book ranges from 68 to 111. The average number of questions per chapter increases from an average of eight and one-half in Book 1 to thirteen in Book 8 (Table 4). Also, some directions for exercises have to be changed, so students can easily record their answers on separate paper (these adaptations are given in Part 2, Section I).

Table 4
Technical Aspects of The Morgan Bay Mysteries

Title	Total Words	Number of Different Words	Grade Placement[1]	Vocabulary Breakdown[2] I	II	III	IV	Unlisted
The Mystery of Morgan Castle	7,348	286	2.3	196	60	13	4	13
The Mystery of the Marble Angel	7,591	312	2.6	208	61	22	6	15
The Mystery of the Midnight Visitor	9,466	355	3.2	238	60	24	5	28
The Mystery of the Missing Marlin	10,578	386	3.5	245	76	29	5	31
The Mystery of the Musical Ghost	12,225	434	3.5	255	98	36	9	36
The Mystery of Monks' Island	11,322	536	3.7	277	119	66	16	58
The Mystery of the Marauder's Gold	11,655	559	3.9	268	123	76	29	63
The Mystery of the Myrmidon's Journey	13,379	568	4.0	284	121	72	22	69

[1]As indicated by the Spache Readability Formula.

[2]Gates's A Reading Vocabulary for the Primary Grades lists 1,811 words rated by utility, child-interest, frequency of appearance in primary-grade literature and primary-grade vocabulary. Level I words occur in the first 500 listed; level II words in the second 500; level III words in the third 500; level IV words in the last 311. Unlisted words are those words which are not included in Gates's word list.

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Table 5
Technical Aspects of Adapted Materials

Title	Number of New Words	Number of Units for Page & Paragraph	Average Number of Words Per Unit	Total Number of Running Words	Number of Questions	Average Number of Questions Per Chapter
	Single Word	Oral Reading	Oral Reading	Oral & Silent		Comprehension
The Mystery of Morgan Castle	289	81	90.6	14,696	68	8.5
The Mystery of the Marble Angel	107	63	120.4	15,182	82	10.2
The Mystery of the Midnight Visitor	102	59	160.4	18,932	93	11.6
The Mystery of the Missing Marlin	82	61	173.4	21,156	90	11.2
The Mystery of the Musical Ghost	95	70	174.6	24,450	94	11.7
The Mystery of Monks' Island	147	68	166.5	22,644	111	13.8
The Mystery of the Marauder's Gold	139	69	168.9	23,310	82	11.7
The Mystery of the Myrmidon's Journey	118	76	172.0	26,758	104	13.0
	1,079	547		167,128	724	

Additional Lesson Materials

To supplement the reading books some extra materials are needed. The additional materials consist of word cards, word lists, lesson sheets, vocabulary review sheets, graphs, and answer keys to questions (Part 2, Section II). These materials serve the following uses:

1. Word cards: presenting new words before book content is read
2. Word lists: guiding the presentation of new words
3. Lesson sheets: guiding lesson activities and recording responses
4. Review sheets: recording unknown words and responses to these words on delayed presentation
5. Graphs: tabulating and accumulating points earned on lessons
6. Answer keys: giving right answers to check responses to questions

Also needed are student folders for collecting the lesson materials and tutor kits for storing materials connected with instruction.

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